Naval Research Laboratory

Subject: Determination of Sea Surface Conditions Using Ksylab L-Band and Radscat Passive Microwave Radiometers

NDPR T-4126B(Johnson Space Center Purchase Order Number)

PROGRESS REPORT ON EPN 384

Prepared by: James P. Hollinger Date: 28 August 1973

This report covers the time period since 23 July although budget figures are only available through 30 June.

Work continued on the antenna convolution program. It is now essentially complete and testing has begun. Initially tests will be made using very simplified models of the sea surface and atmosphere and an assumed antenna pattern. Eventually the program will be used to investigate various simulated sea surface and atmospheric conditions over a wide range of experimental and environmental conditions and will be used to evaluate sources of error and to study antenna pattern effects.

The antenna pattern situation is still unresolved. I understand by the letter of 16 August from M. E. Dell, NASA Project Officer, that we are to receive tapes of raw data on the S-194 antenna patterns from AIL. Although we are not funded to develop the pattern information required for our analysis, we will look into the effort necessary to edit and reduce these raw data tapes and obtain the desired pattern information. Our understanding of the status of the S-193 antenna patterns and our opinions regarding the various options are given in our letter of 10 August to Mr. Nick Hatcher.

We have received ground truth information from Dr. Pierson and from Mr. Duncan Ross for Skylab 2. We have also received some photographic data from Skylab 2 but we have not received any microwave data as yet.